

ASKING SASKATCHEWAN

Canada. Dept. of Agriculture  
South Saskatchewan  
River Dam.



Ref. Camp  
C 1101  
237

## PROGRESS OF CONSTRUCTION

CA 1

DA

- Z339



# SOUTH SASKATCHEWAN RIVER DAM

SUPPLEMENT NO. 1  
(REVISED)  
1962 - 1963

# PROGRESS

General view of partially constructed high-level intake structures.

Interior shot of tunnel where stee



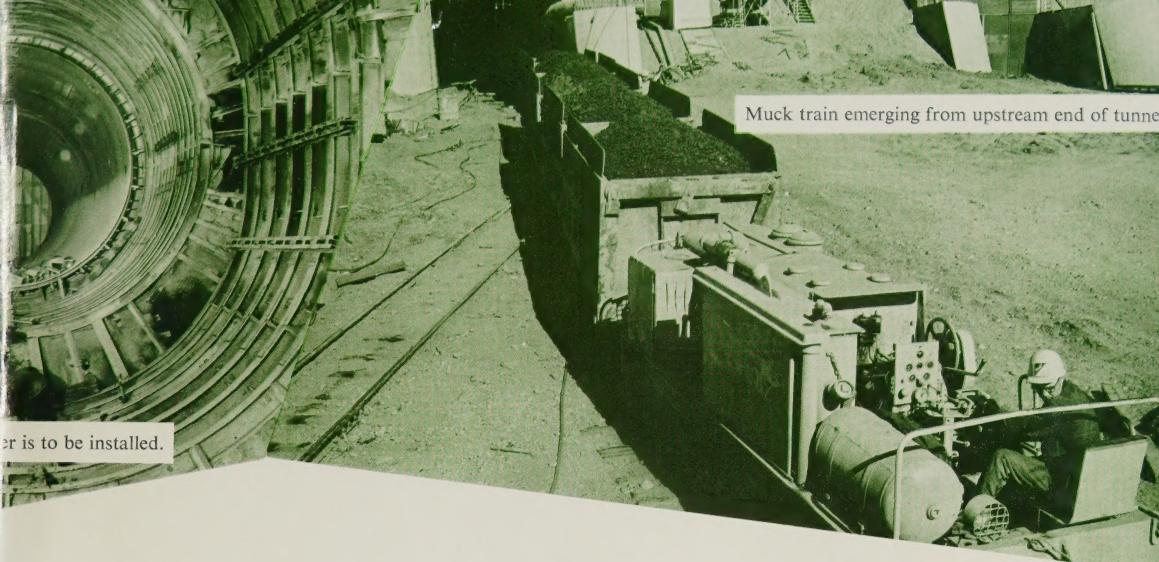
Following another year of steady progress, the South Saskatchewan River Dam Project approaches the half-way mark in development as construction enters its fifth year. Work began on the huge multi-purpose water conservation project early in 1959, and has continued on a year-round basis since that time.

Largest of its kind ever to be built in Canada, the project is a joint undertaking between the Government of Canada and the Province of Saskatchewan. Its purpose is to achieve thorough storage and stream flow regulation, more effective control of the river for irrigation, power development, domestic and urban water supply and recreation.

Under the agreement providing for development, the Federal Government pays the major portion of the cost associated with the construction of the dam and creation of the reservoir, while Saskatchewan is responsible for all facets of development associated with making more effective use of the water.

The Prairie Farm Rehabilitation Administration of the Canada Department of Agriculture, with headquarters in Regina, is charged with the task of constructing the principal water storage and control works. PFRA assumes responsibility for all survey, planning, design and supervision of project construction.

Thus far, development has been confined to the construction of the main dam on the South Saskatchewan River, located midway between the towns of Outlook and Elbow. This also involves the building of access roads, relocation of highways that will be inundated by the waters in the reservoir when the project is completed, and establishment of the PFRA



Muck train emerging from upstream end of tunnel

er is to be installed.

1962 / '63

construction headquarters at the site. At a later date, a second dam will be built in the Qu'Appelle Valley, southeast of the town of Elbow, to control the flow of water from the reservoir into the Qu'Appelle River system.

To date, 32 construction contracts have been awarded valued at approximately \$58,000,000. Of these, 22 contracts have now been completed, 7 are still in progress, and 3 are not yet started. Expenditures on completed contracts and partial payments made on contracts still in progress, total \$49,000,000. Another \$8,700,000 has been spent by Canada for engineering services and administration on the project.

During 1962, major emphasis in work continued on construction of the five river diversion tunnels under the west abutment of the dam, and on construction of the earth embankment.

Mining of the five river diversion tunnels which are required to pass the flow of the river around the construction area following final closure of the river, and later to deliver water for hydro-electric power production, was completed during the year. Since construction began in the late fall of 1959, nearly four miles of 25'-diameter tunnel have been excavated. With this phase of work completed, the huge mechanical mining equipment commonly referred to as the 'Mole', used throughout most of the tunnelling operation, was removed from the construction area in late February 1963, and transported to the nearest railhead for shipment to its next assignment. The tunnels have since been lined with steel reinforcing and concrete to a finished inside diameter of 20 feet, and steel liners have been installed in the downstream half

of the three tunnels to be used for hydro-electric power production. In addition, high-level intakes and control shafts for the five tunnels have been constructed.

Next, the tunnel control gates and mechanisms will be installed, making the tunnels ready for operation. On the basis of progress to date, this might be achieved by the late fall of 1963, permitting closure of the river and diversion of its waters through the tunnels at that time.

Earth work during the year centered mainly on construction of that portion of the embankment on the extreme west end of the dam which spans the Coteau Creek area. Two previous earth-moving contracts involved raising the embankment on either side of the river, including a section of the river channel itself, to approximately one-half its final height. The contract currently under way provides for the extension of the embankment to the far west extremity of the dam. By the end of March, 1963, about 70 percent of the earth work associated with this latter phase of construction had been completed. A further contract shortly to be awarded, provides for the remainder of the river to be dammed off and the flow diverted through the tunnels.

One other interesting operation at the dam—the processing of concrete aggregate required in the construction of the river diversion tunnels and spillway—was also completed during the year. This involved the processing of 1,600,000 tons of sand and gravel.

To accomplish this work, a labor force of from 800 to 1,200 men, depending upon seasonal requirements, was employed at the site throughout the year.

# SOUTH SASKATCHEWAN RIVER DAM

# PROGRESS BY CONTRACT

## CONTRACT PHASE INVOLVED

- No. 1 \*East access road
- No. 2 \*Aggregate processing
- No. 3 \*Headquarters arteries construction
- No. 4 \*Headquarters buildings
- No. 5 \*Bridge substructure
- No. 6 \*East embankment (Stage 1)
- No. 7 \*North access road
- No. 8 \*Bridge superstructure
- No. 9 \*West embankment (Stage 2)
- No. 10 \*Headquarters water supply system
- No. 11 \*Headquarters pumping units
- No. 12 \*Tourist pavilion
- No. 13 Coteau Creek embankment (Stage 3)
- No. 14 Downstream diversion tunnels
- No. 15 \*Steel ring beams
- No. 16 \*Revision highway No. 45
- No. 17 \*Revision highway No. 19
- No. 18 \*Cement (downstream portals)
- No. 19 \*Relief wells and conduit
- No. 20 \*Gravel revision highway No. 45
- No. 21 Upstream diversion tunnels
- No. 22 \*Aggregate processing
- No. 23 \*Gravel revision highway No. 19
- No. 24 Cement (diversion tunnels)
- No. 25 Tunnel control shaft substructures
- No. 26 \*Revision highway (Tichfield to No. 15)
- No. 27 Tunnel outlet basins
- No. 28 Control shaft superstructure
- No. 29 Tunnel control gates and embedded parts
- No. 30 \*Supply tunnel ring beams
- No. 31 Embankment (Stage 4)
- No. 32 Tunnel control gate hoists
- No. 33 Gravelling highway revision  
(Tichfield to No. 15)

## CONTRACTOR

CONTRACTOR	AMOUNT OF CONTRACT
Evans Construction Co. Ltd.	\$ 172,469.00
McNamara Limited	812,030.00
Beattie Ramsay Const. Co. Ltd.	242,314.50
Smith Bros. & Wilson Ltd.	738,179.00
The Foundation Co. of Canada Ltd.	339,354.00
Perini Limited	2,941,380.00
Taylor Bros.	168,680.60
Bird Construction Co. Ltd.	945,871.00
Piggott Construction Ltd.	6,983,457.50
Beattie Ramsay Const. Co. Ltd.	22,320.00
Canadian Fairbanks Morse Co. Ltd.	12,026.00
Bird Construction Co. Ltd.	20,600.00
Bedford Construction Co. Ltd.	8,297,950.00
Kiewit-Johnson-Poole	8,064,175.00
Commercial Shearing Ltd.	2,689,680.00
Pedersen Construction Ltd.	150,038.00
Acorn Construction Ltd.	256,105.00
Canada Cement Co. Ltd.	112,965.00
Piggott Construction Ltd.	267,081.10
W. F. Bodkin Construction Ltd.	14,895.00
Kiewit-Johnson-Poole	8,658,500.00
McNamara Limited	1,693,750.00
Nick Linden Construction	40,800.00
Inland Cement Co. Ltd.	1,867,050.00
Canada Cement Co. Ltd.	1,251,171.86
Kiewit-Johnson-Poole	5,005,520.00
Sanderson & Elgert	140,003.00
Bedford Construction Co. Ltd.	973,425.00
Kiewit-Johnson-Poole	955,068.00
Dominion Bridge Co. Ltd.	1,136,560.00
Sask. Steel Fabricators Ltd. (Awarding of contract pending)	537,721.25
Dominion Bridge Co. Ltd.	—
South Construction Co. Ltd.	370,654.00
	15,370.00

\* Denotes completed contracts.

ROGER DUHAMEL, F.R.S.C.  
QUEEN'S PRINTER AND CONTROLLER OF STATIONERY  
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